

AMENDMENTS TO THE CLAIMS

1. (Original) A nucleic acid purification method wherein

a nucleic acid capturing tip incorporating the solid phase containing a nucleic acid capturing agent is used to allow said solid phase to capture a nucleic acid and to extract the nucleic acid,

said nucleic acid purification method characterized in that washing solution is fed in the tip containing the solid phase capturing said nucleic acid unidirectionally from the head to the end.
2. (Original) A nucleic acid purification method according to Claim 1 wherein the flow path leading to said nucleic acid capturing tip is provided with a branch of a washing solution flow path where a washing solution is supplied.
3. (Original) A nucleic acid purification method according to Claim 1 further characterized in that a special-purpose flow path is provided to lead a washing solution into said nucleic acid capturing tip.
4. (Original) A nucleic acid purification method according to Claim 1 further characterized in that air is sent into said flow path.
5. (Original): A nucleic acid purification method according to Claim 1 further characterized in that discharge of washing solution and feed of air are repeated alternately.

Claims 6-11. (Canceled)

12. (Previously presented) A nucleic acid purification apparatus comprising:

a nucleic acid capturing tip incorporating a solid phase containing a nucleic acid capturing agent; and

a nozzle that allows contact of said solid phase with a nucleic acid containing solution to further cause said solid phase to contact with a washing solution, wherein said nozzle sends air to said solid phase after said solid phase and said washing solution were mutually contacting.

13. (Previously presented) A nucleic acid purification apparatus according to claim 12, wherein said tip allows contact of said solid phase contact with eluent after sending said air.

14. (New) A nucleic acid purification apparatus comprising: a nozzle being capable of holding a tip incorporating a solid phase containing a nucleic acid capturing agent, wherein the nozzle allows contact of the solid phase with a nucleic acid containing solution to further cause the solid phase to contact with a washing solution, and wherein the nozzle discharges air into the tip after discharging of washing solution from the tip so that remaining liquid is discharged from the tip.

15. (New) A nucleic acid purification apparatus according to claim 14, wherein the nozzle, after discharging the remaining liquid, allows contact of the washing solution with the solid phase to discharge the washing solution then discharges air into the tip so that the remaining liquid in the tip is discharged therefrom.

16. (New) A nucleic acid purification apparatus according to claim 14, wherein the nozzle, after discharging the remaining liquid, allows contact of an eluent with the solid phase to discharge the eluent.

17. (New) A nucleic acid purification apparatus according to claim 16, wherein the tip and the nozzle are mutually connected from beginning of sucking of the nucleic acid containing the solution to the end of discharging of the eluent.

18. (New) A nucleic acid purification apparatus according to claim 14, wherein the tip is provided with a blocking member having a hole such that the size thereof is able to block outflow of the solid phase.

19. (New) A nucleic acid purification apparatus according to claim 14, wherein the nozzle is connected to a syringe pump.

20. (New) A nucleic acid purification apparatus according to claim 19, wherein the syringe pump is connected to a valve being capable of feeding air into the syringe pump.

21. (New) A nucleic acid purification apparatus according to claim 14, wherein the nozzle is connected to a first syringe pump being capable of discharging acid into the tip, and a second syringe pump being capable of sucking and discharging solution through the solution path at its top of the tip.

22. (New) A nucleic acid purification apparatus according to claim 14, wherein the washing solution is aqueous solution of ethanol.

23. (New) A nucleic acid purification apparatus according to claim 14, wherein the solid phase contains silica.

24. (New) A nucleic acid purification apparatus comprising:

a nozzle being capable of holding a tip incorporating a solid phase containing a nucleic acid capturing agent;

a syringe pump being connected to the nozzle and a valve, wherein the valve is capable of feeding air into the syringe pump; and

a mechanical controller being capable of controlling the syringe pump and the valve, wherein the controller drives the syringe pump to discharge a washing solution in the tip outside the tip, drives the valve to bring the syringe pump under readiness for sucking air, drives the syringe pump to suck air thereinto, drives the valve to disable the syringe pump from sucking air, and drives the syringe pump to discharge air into the tip.

25. (New) A nucleic acid purification apparatus according to claim 24, wherein the tip is provided with a blocking member having a hole such that the size thereof is able to block outflow of the solid phase.

26. (New) A nucleic acid purification apparatus according to claim 24, wherein the washing solution is aqueous solution of ethanol.

27. (New) A nucleic acid purification apparatus according to claim 24, wherein the solid phase contains silica.

28. (New) A nucleic acid purification method using a tip incorporating a solid phase containing a nucleic acid capturing agent, comprising the steps of:

contacting a nucleic acid containing solution with a solid phase;

discharging the nucleic acid containing solution outside the tip;

contacting a washing solution with the solid phase;

discharging the washing solution outside the tip; and

discharging air into the tip after discharging washing solution so that remaining liquid is discharged from the tip.

29. (New) A nucleic acid purification method according to claim 28, further comprising the steps of:

contacting the washing solution with the solid phase after the discharging of the remaining liquid;

discharging the washing solution outside the tip; and

discharging air into the tip after discharging the washing solution so that the remaining liquid is discharged from the tip.

30. (New) A nucleic acid purification method according to claim 28, further comprising contacting an eluent with the solid phase after the discharging the remaining liquid and discharging the eluent outside the tip.

31. (New) A nucleic acid purification method according to claim 28, further comprising blocking outflow of the solid phase by a blocking member provided on the tip, wherein the blocking member is provided with a hole having a size capable of blocking the outflow of the solid phase.